

cambial activity, the relation of xylem and phloem formation, and the like. As the result of two years' studies he concludes, for this species, that the development of the phloem precedes that of the xylem; that the first increase in diameter of xylem begins a few meters below the apex; that the development of the xylem begins about a month later than the leaf formation, altho there seems, according to other investigation a diameter increase about the time the leaves appear. This, the author thinks, is due mainly to a swelling of the tissues, of the turgor type.

It is suggested that temperature of the soil, moisture of the air, the thickness and color of the bark, as well as other unknown factors may determine the place and date of diameter increase.

CELL-DIVISION IN THE SEX CELLS OF TAENIA

Harmon (J. of Morph., June, 1913) presents evidence that the division of the spermatogonial cells and the two spermatocyte divisions in *Tænia* are mitotic. In the ova mitosis is frequent and there is no evidence of amitosis in the oogonial division; the maturation divisions are mitotic, and mitotic divisions occur both in early and late cleavages. The author believes that there is no reason to believe that amitotic division occurs in this animal—contrary to the conclusions of earlier studies. She believes that the close contact of nuclei and other items that have been interpreted as meaning amitosis are due merely to special conditions of mitosis—as the nuclei dividing more rapidly than cytoplasm, shortness of cleavage spindle, swift reconstruction of nucleus after splitting of chromosomes, rapid growth of daughter nuclei, etc.

METAMORPHOSIS OF FILARIA LOA

Dr. Leiper (Lond. Sch. Trop. Med., Jan., 1913) telegraphs from Calabar that the Metamorphosis of *Filaria loa* has been proved to take place in the salivary glands of a fly belonging to the genus *Clorysops*.

DEMONSTRATION OF BROWNIAN MOVEMENT

Mr. Travis of the Queckett Club describes a satisfactory method of demonstrating striking Brownian movements. Rub a small amount of gamboge for a few moments on an ordinary microscope